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Ohio State University

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NUMBER VI SEPTEMBER, 1930

TOTALITY

BY

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Professor of Anthropology and General Linguistics
University of Chicago

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PREFATORY NOTE

The present paper on Totality is but the first instalment of a general work on language entitled *Foundations of language, logical and psychological, an approach to the international language problem,* by William E. Collinson, Mrs. Alice V. Morris, and Edward Sapir, edited by Mrs. Alice V. Morris. This work is sponsored by the International Auxiliary Language Association. In the preliminary work that has already been done by the three collaborators it soon became evident that many questions of a theoretical and analytical nature would have to be taken up that are of perhaps minor interest for the solution of purely practical problems. The work is intended as an aid toward such solution and for the eventual use of all those who are interested in fundamental problems of language structure, whether they wish to make practical applications of the insights secured to the international language problem or not. This and other papers that may follow from time to time are printed in this place because of the general linguistic interest which it is hoped they possess.

The nucleus of *Foundations of Language* consists of:

1. Introduction
2. Units of communication: the sentence
3. Fundamental types of referents: a natural basis for parts of speech
4. Fundamental relational notions and their linguistic expression
5. Notions of order
6. Indication
7. Quantity
8. Space
9. Time
10. Existents and their linguistic expression: the noun
11. Occurrents and their linguistic expression: the verb
12. Modes of existence and occurrence: the adjective and the adverb
13. Notional inventory of experience: its expression in nuclear words
14. Extension of the nuclear vocabulary: word-building
15. Expressiveness in language

The present paper on Totality is merely a section of that part of *Foundations of Language* which deals with Quantity. Its place in the total scheme is indicated by the following table of contents of the eventual work on Quantity:

1. General Introduction to notion of quantity
    (a) Notions applied to quantification
        i. Affirmation and negation
        ii. Identity and difference
        iii. Indication
        iv. Grading
        v. Limiting: excluding and gauging
        vi. Composite wholes: aggregation and distribution
        vii. Ratio and proportion
        viii. Normation
    (b) Quantifiables
    (c) Methods of quantification: numbering, measuring, and calculating
    (d) Quantificates
2. Classification of quantifiers and quantificates
3. Types of quantification
    a. Singularity and plurality
    b. Number: cardinals and fractions
    c. Totality
    d. Unity
    e. Duality
    f. Quantification by partials
    g. Indefinite quantification
4. Negation in quantitative expressions
5. Transfer of quantitative concepts

It is a great pleasure to record my indebtedness to Mrs. Morris for her unflagging zeal in the prosecution of the work, of which Totality is a harbinger, and for the extraordinarily acute criticism that she has exercised at its every stage. There is hardly a paragraph in the present paper which has not profited from her keen interest. To Professor Collinson too I am indebted for numerous and valuable suggestions.

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GLOSSARY OF TECHNICAL TERMS

1. *Quantifiable:* anything concerning which quantity may be predicated. It answers to the question 'So and so much (many) what?' or 'To such and such a degree what?'
2. *Quantifier:* a term which expresses any quantitative judgment. It measures or counts or grades a quantifiable. It answers to the question 'How much *or* How many *or* To what degree so and so?' A term which cannot answer one of these questions is not a quantifier.
3. *Quantificate:* a quantified quantifiable; a linguistic expression which indicates that a quantifiable has been quantified. It answers to the question 'How much (many) of what?' or 'To what degree what?' It may serve to quantify further and then becomes a quantifier called a quantificate-quantifier (specialized quantifier).

   NOTE (A. V. M.): Take the sentence 'Four men are coming'. To the question 'Four what?' the answer gives the quantifiable 'men'. To 'How many men?' the answer gives the quantifier 'Four'. To 'How many of what?' the answer gives the quantificate 'Four men'.

   In 'That rose is very red', the question 'very what?' elicits the quantifiable 'red'; 'To what degree red?' elicits the quantifier 'very'; and 'To what degree what?' elicits the quantificate 'very red'.

   'A cupful' as such is a quantificate; it means 'what is contained by a *full cup*'. 'A cupful of tea' is a quantificate of a higher order in which 'tea' is the quantifiable and 'a cupful of' the quantifier (quantificate-quantifier, specialized quantifier).

4. *Direct quantifier:* a quantifier which is directly apprehended, without the necessity of arriving at the intended quantity by going through one or more mathematical operations, e.g. *four, swarm.*
5. *Calculated quantifier:* a quantifier which is apprehended mediately, with the necessity of arriving at the intended quantity by going through one or more mathematical operations, e.g. *the sum of, the whole computed acreage of.*
6. *Totalizer:* a quantifier whose function it is to emphasize the fact that in the given context the quantifiable is not to be thought of as capable of increase, e.g. *all, the whole flock.*

I. WHOLE-PART RELATION AND TYPES OF TOTALIZED EXISTENTS AND OF TOTALITY

The notion of totality may be considered as instinctive in the sense that it so easily and necessarily arises from experience that it is difficult, and for most individuals probably impossible, to reduce it to simpler terms. It seems possible, however, to derive it psychologically from two sorts of experience: (1) the feeling of rest or of inability to proceed after a count, formal or informal, has been made of a set or series or aggregation of objects; (2) the feeling of inability or unwillingness to break up an object into smaller objects. These feelings, which may be schematically referred to as the 'all' and the 'whole' feeling respectively, are correlative to each other. They arise naturally from experience with objects.

The mind views objects as if they functioned in two ways, tending, on the one hand, to keep their distance from each other—e.g., a table as distinct from a chair; on the other hand, to cohere in functional units—e.g., a table and a chair as necessary parts of a set of furniture and as jointly excluding such other objects as people. Furthermore, such objects as tables and chairs may frequently be viewed as falling apart into separate segments, objects of a secondary or functionally lower order, which may, actually or in imagination, be reassembled into the 'whole' table and the 'whole' chair. We may count the segments of a table until we have 'all' of them needed for the reconstruction of the table, just as we can count the pieces of furniture needed to make up 'all' the members of a set of furniture.

But there is an important difference between the segment as related to the table and the table as related to the set of furniture. The segments have little or no meaning as such. They are merely constituents or functionally meaningless fragments, which the mind at once reassembles into a continuous structure. On the other hand, the table is a significant entity in itself and can be made to cohere with the chair only in a mental sense because of the unitary 'meaning' given to the concept of a set of furniture. The more value we attach to this remoter unity of the set, the greater becomes its psychological resemblance to the more immediately given unity of the table itself, so that we may

finally complain of 'a broken set', with its concomitant feeling of vexation. The more vivid the feeling of unity of the set, the more applicable to it is the term 'the whole set'; the less vivid the feeling of unity, the more easily we resign ourselves to saying 'all the pieces of the set'. The more vivid the feeling of unity of the table, the more applicable to it are such terms as 'the whole table' or 'the entire table'; the less vivid the feeling of unity, the less unnatural it becomes to speak of it as 'the aggregate of such segments as go to make up the table' or 'all the table-segments'.

We may consider these feelings of 'all' and 'whole' as abstracted from our apprehension of the whole-part relation in existents. If we think of the whole-part relation, as psychologically we must, as involving operations or kinaesthetic experiences in keeping, disintegrating, and aggregating existents, then, if we wish to classify existents in terms of the whole-part relation, we may describe them in terms of those operations and we may distinguish them broadly as non-totalizable and totalizable. The former kind may be called the 'kept' existent, that is, the object preserved as such, thought of as such, neither analyzed nor aggregated. Such an existent can not be totalized, only individualized, e.g. '*the* table', '*the* cheese'. The totalizable existent is one which is thought of as susceptible of various kinds of aggregation, either direct or based on some previous operation of disintegration. When we proceed to apply to such existents the various operations of totalizing, we are driven to analyze them into six types.

1. The existent thought of as divisible into parts but as 'resisting' such division. Such an existent is given as totalized from a potential aggregate, e.g. '*the whole* table', '*the whole quantity of* water'. This type may be named 'whole existent'.

2. The existent thought of as an aggregate of parts derivable from a normally undivided existent. Such an aggregate may be said to 'seek' totalization in the form of type 1, e.g. '*all the parts of* the table', considered as psychologically 'self-driven' toward 'the whole table'. '*All of* the table' more or less adequately expresses this type of totalized existent. 'All of the table' is to 'the whole table' as 3/3 is to 1. This type may be named 'summated existent'.

3, compounded of 1 and 2. The existent thought of as divisible into parts but apprehended as persistently resisting deformation into a summated existent (type 2), e.g. '*The whole of* the table is of oak', '*the whole of* the water is boiling'. Here the mind seems to linger on the wholeness of the existent rather than on the existent itself. This type

may be named 'persistently whole existent' or 'reassertedly whole existent'.

4. The aggregate of existents, each of which is considered as having functional reality. Such an aggregate does not 'seek' totalization but may be said to 'be driven' to it, e.g. '*all* the tables (or cheeses)', considered as psychologically 'driven' toward 'the whole set of tables (or cheeses)'. The 'all' of such an aggregate consists either of a set of terms, say an accidental number series or an accidentally isolated number of existents, that do not cohere except in so far as we make them cohere by mental segregation from other existents—e.g. '*three*'; '*five* tables'; '*five* cheeses'; '*all* the tables (or cheeses)'—(totality arrived at by mere enumeration); or else of a set of terms, say '*a set of* tables' in a given room, or '*a collection of* waters' in an exhibit, which can be thought of as having function apart from the mere fact of aggregation (totality arrived at by some kind of formal assemblage). This type may be named 'aggregate' or 'simple aggregate'.

5. The aggregate thought of as divisible into members or parts and as 'not resisting' such division. Such a collectivity has been totalized from an actual aggregate, e.g. '*the whole set of* tables'. This type may be named 'whole aggregate'.

6, compounded of 4 and 5. The aggregate apprehended as threatening, as it were, to fall apart into a simple aggregate whose totality is 'all', and such threatened deformation being resisted but resisted in vain, e.g. '*all of the set of* tables', or, more briefly, '*all of* the tables (or cheeses)', which is really a compound totalized existent in which the totalizing feeling properly applicable to a summated existent (type 2) is applied to a whole aggregate (type 5). We naturally say 'all the tables' but, preferably, 'all of the tables in this set'. This type may be named 'relapsed collection' or 'reasserted aggregate'.

It is probable that of the types of part-whole existents the ones that are nearest to intuitive or primary observation are the 'kept' non-totalizable existent, the whole existent (type 1) and the simple aggregate (type 4). The whole aggregate (type 5) follows readily on the heels of 4 by the application to it of the integral feeling characteristic of 1; in other words, aggregates may be looked upon, psychologically, as secondary objects created by the transfer of the feeling of individuality to an aggregate. To put it in slightly different terms, 'the whole set of tables' is a metaphor, based on 'the whole table', which reinterprets 'all the tables'. Type 2, a summated existent, is perhaps the most sophisticated of all part-whole existents, and results from the application

of the aggregational feeling characteristic of a simple aggregate (type 4) to a whole existent (type 1). This transfer mechanism may be expressed by saying that 'all the parts of the table' or 'all of the table' is a metaphor, based on 'all the tables', which reinterprets 'the whole table'. Naturally, the experiences which underlie these transfers are, on the one hand, the coalescence of countable units into functionally close-knit sets, e.g. of the tables and chairs and certain other objects of a well-planned room into a definite set of furniture; and, on the other hand, the frequent psychological breaking up of an object into countable fragments, the object itself being retrospectively analyzed into the ordered sum of these destined fragments.

Taking the six types of totalized existents, we get the following scheme of terms of totality:

Neutral term: *totality*.

1. Totality of an existent which resists division, e.g. '*The whole* table is well made', '*the whole/quantity of*/water is infected'. (Totality of a whole existent.)
2. Totality of parts of a normally undivided existent, e.g. '*All parts of* the (or *all of* the) table are (or is) well made', '*all of* the water is infected'. (Totality of a summated existent.)
3. Totality of an existent which persistently resists division, e.g. '*The whole of* the table is of oak', '*the whole of* the water is infected'. (Totality of a persistently whole existent, or of a reassertedly whole existent.)
4. Totality of existents in a collection, e.g. '*All* the tables have been brought in', '*all the/kinds of*/waters are bottled'. (Totality of an aggregate, or of a simple aggregate.)
5. Totality of an undivided collection or individualized aggregate, e.g. '*The whole set of* tables forms a long line'. (Totality of a whole aggregate.)
6. Totality of an aggregate which has vainly resisted threatened deformation, e.g. '*All of the set of* tables are of oak', '*all of* the tables (in this set) come from France'. (Totality of a relapsed collection, or of a reasserted aggregate.)

II. EXISTENTS 'INDIVIDUALIZED' AND 'INDEFINITELY MASSED'

So far we have been considering whole-part existents without reference to whether or not they have an assignable structure. Existents may be conceived of either as having structure, e.g. *the table, the land* belonging to X, *the cheese* formed into a definite object, or as not having structure, e.g. *the wood* as material, *the land* extending indefinitely, *the cheese* thought of as food rather than as shaped. The former type may be called 'individualized', the latter 'indefinitely massed'. In many languages these two types of objects tend to be differently totalized.

In English, totality of an individualized object tends to be expressed as in '*the whole* table', '*the whole* land was annexed'; and totality of an indefinitely massed object as in '*all* the milk has turned sour', '*all* the land was inundated'. Observe that such terms as '*the whole of* the land' (type 3) and '*all of* the land' (type 2) apply only to individualized objects. The *all* of indefinitely massed objects is particularly suited to such abstract entities as 'talk', e.g. '*all* the talk is unnecessary'. '*The whole* talk' necessarily refers to a limited discourse (type 1), '*all of* the talk' to a potentially divided discourse with sections or time-measured parts (type 2), 'during *the whole of* the talk' to a discourse conceived of as a cumulative unit (type 3). Existents which are logically aggregates, such as 'piled up wood', may metaphorically be conceived of as indefinitely massed objects, hence '*all* the wood', rather than '*all the pieces of* wood' collectivized into '*the whole pile of* wood'.[1]

[1] A note of warning. It is not claimed for a moment that the ordinary English uses of 'the whole', 'all of', 'the whole of', and 'all' necessarily correspond to our exacting distinctions, merely that they tend to do so. In actual practice there is considerable confusion.

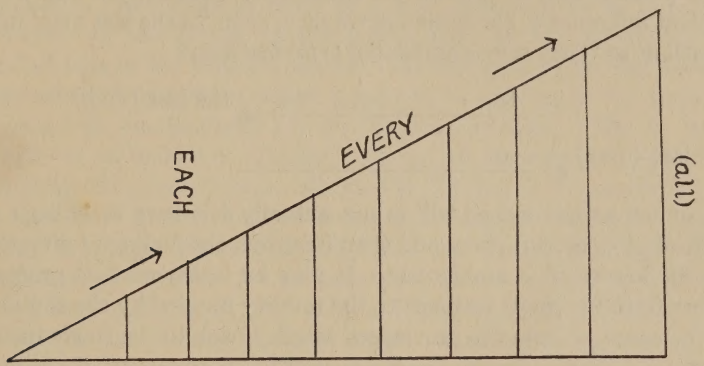
III. SINGULARIZED TOTALIZERS

There are still other distinctions in the expression of totality that must be recognized. One of the most important of these is the difference between the itemizing or singularizing totalizers and the ordinary aggregating ones. The former, of which 'each' and 'every' are the type, do not directly express totality but definitely imply it in a reference which is individual in form. In other words, 'every *a*' singles out a particular *a* only to emphasize the point that all the other *a*'s of the set differ in no relevant respect from it. 'Each' is used preferably for the members of an aggregate of two or, in any event, an aggregate which is numerically small. There is considerable confusion in usage, however, just as there is between the corresponding reciprocals 'each other' and 'one another'. 'Each' differs further from 'every' in individualizing more clearly at the expense of the notion of totality, so that at times this notion becomes quite pale, whereas it is always strongly implied with 'every'. 'Each' is therefore particularly appropriate in all contexts in which the 'every' of an aggregate is looked upon as selected or otherwise specifically determined; hence '*each* member of a series A as compared with *the corresponding* member of a series B', where 'every' would have a blurring, aggregating effect. On the other hand, 'not *every* instance', not 'not *each* instance', because with a negation there can be no true individualizing. Note that the greater individualizing force of 'each' and its restricted reference to a small or easily comprehended aggregate are really two facets of a single psychological fact; for the smaller the aggregate, the more individualized its members tend to become. Perhaps the most accurate distinction that can be made between 'each' and 'every' is this, that 'each' tends to mean 'all, taken one at a time' (in other words, is the meaning of 'all, taken n at a time', when n = 1), whereas 'every' is rather an 'all, accumulating by increments of one'.

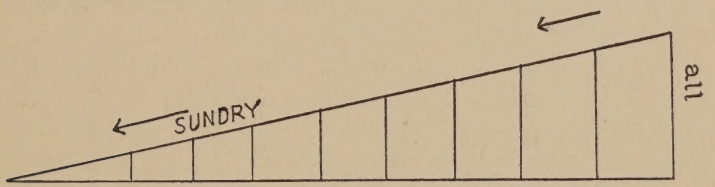
'Each' and 'every' apply primarily to aggregates of type 4, but, just as the notion of 'all' may blend with that of 'the whole (set)' into 'all of' (type 6), so they too blend with it into notions expressed by such terms as '*each of* the men', '*each one of* the men', '*every one* of the men'. It is

natural to say '*every one of* the men in that regiment' but not '*every one of* the men in America', for which '*every* man in America' or '*every* American' would have to be substituted, inasmuch as the totality of men in America forms not a significant assemblage but only a statistical aggregate.

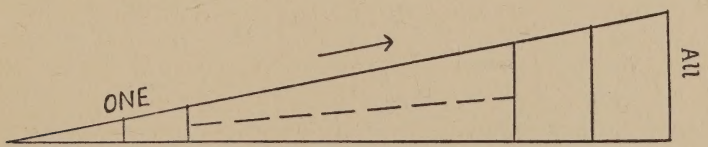
It is interesting to observe that the relative magnitude of 'each' and 'every' is reflected in their positions in the compound cumulative itemizing totalizers '*each and every* man', '*each and every one of* the men'. This feeling may be symbolized as:



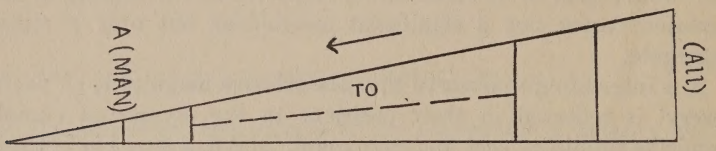
The converse feeling is approximately expressed by 'all and sundry':



Another cumulative totalizer of the 'each and every' type is 'one and all', in which the itemizing is so rapid that it is swallowed up, as it were, in the totalizing notion:



The converse of this seems to be expressed by the use of 'to a man' in such locutions as 'They were annihilated *to a man*':



It is possible also to express the cumulative itemizing feeling without explicit reference to the notion of totality, as in 'to the last man' in such locutions as 'They were annihilated *to the last man*':

to → the last (man) (all)

the last (man) ← to (all)

Inasmuch as the logical 'all' is not actually felt here as either a total arrived at or a total given and then itemized, the feeling of direction in 'to the last man' is ambiguous. It may be interpreted as proceeding either from the single instance to the totality implied by the completion of the count or from the previsaged totality back to the single instance.

IV. DEFINITE AND INDEFINITE TOTALIZERS

A more difficult distinction to make is that of definite and indefinite totalizer. In a sense all totalizers are definite, for in a given aggregate 'all' cannot be ambiguous or indefinite in the sense in which 'some' is indefinite. Nevertheless there is a real difference as to definiteness between 'all the people in the room' and 'all the cardinal points', i.e. 'all four of the cardinal points'. In the former case the totality is predicated of a number which need not be known, in the latter of a known but unexpressed, i.e. an implied, number. 'All' in 'all the people' is an indefinite totalizer; 'all' in 'all the cardinal points' is an implicitly definite totalizer; 'all four' in 'all four of the cardinal points' or 'the four' in 'the four of them' is an explicitly definite totalizer. Many languages possess special terms for certain explicitly definite totalizers, particularly for an aggregate of two, e.g. English '*both* the men', '*both of* the men', '*both parts of* it', where 'both' is the equivalent of 'all two', cf. French 'tous les deux'. Such terms as 'the regiment' (type 5) or 'the pint' (type 1) in 'he drank *the pint* of milk' or '*the deck* of cards' (type 6) may be looked upon as implicitly definite totalizers of specialized types.

V. DIRECT AND CALCULATED TOTALIZERS

So far we have been dealing with direct totalizers, which, like all quantifiers (i.e., terms indicating quantity), may be one-term quantifiers (e.g. *all*, *the whole of*), quanto-quantifiers (e.g. *both* = *all the two*, *all the three parts of*), or compound quantifiers (*each and every one of*).

There are, naturally, also calculated totalizers, of which the additive type is particularly common, e.g. *the sum* (as used in mathematics[2]), *the sum total*, and, of a somewhat more complicated order, terms of the type *net total*, in which there is an implication of going through more than one mathematical operation.

[2] Different, of course, from *the sum* in such locutions as '*the sum* of money which I give you', which is really an indefinite quantifier, equivalent to *the amount of*.

VI. THE ALL OF UNIVERSAL STATEMENTS

Until now we have dealt only with the concept of totality in 'enumerative' (totalized particular) statements (e.g. '*All* the people in this room are wealthy') or in singular statements (e.g. '*The whole* cheese is spoiled'). The question arises of whether or not to look upon the *all* of universal statements (e.g. '*All* men are mortal') as a true totalizer. There is no question here of a true totality, explicitly or implicitly definite or even indefinite (as in '*all* the men in this room', where no count has been made), but of a class. Any example of the class, namely *a man* or *this* or *that* particular man, is not, strictly speaking, a definite part, fraction, of the class (which might then be said to be diminished by one if the example is singled out and dismissed), but merely a particularized representative of the class itself. Hence '*All men* are mortal' says no more than '*Men* are mortal' or '*All the men* who can be thought of are mortal' or '*The men* who can be thought of are mortal' or '*Every man* is mortal' or '*Any man* is mortal' or '*Any men* are mortal' or '*A man* is mortal'. All these locutions are merely periphrases for the more logically expressed universal statement '*Man* is mortal'.

All and *every* in these examples are, then, not totalizers in the strictly logical sense but class-indicators. Inasmuch as the notion of class arises, in experience, from the accumulation of particular instances, the illusory feeling is produced of a prolonged count looking eventually to a closed total (*all*). In other words, *all* in '*All* men are mortal' arises psychologically from the unconscious solution of the illogical proportion:

This man (of those who are here): *all* the men (who are here), a sum =
this man (of all possible men): x, an unknown sum.

But x is not a sum, but a class of indifferent membership as to number.

The pseudo-totalizing nature of *all* in universal statements comes out clearly in English when we try to substitute *all of* (type 6, totality of a reasserted aggregate) for *all*, e.g. '*all of men* are mortal', which is impossible, or '*all of the men* are mortal', which at once takes on the meaning of a totalized particular statement, the reference being to a particular aggregate of men. This is because *all of*, with discrete existents,

expresses totality of a relapsed collection or of a reasserted aggregate, and the class 'man' is not such a collection or aggregate. It is, furthermore, significant that in speaking of continua or discretes thought of as continuous, whether true (e.g. 'cheese') or metaphorical (e.g. 'beauty', 'man'), in universal statements one cannot easily use the totalizer appropriate to continua (e.g. '*the whole* cheese', '*the whole* beauty of her face', '*the whole of* mankind', thought of metaphorically as a collection), but generally has recourse to the pseudo-totalizing *all* used for universal statements in speaking of discretes. Hence '*All cheese* is a food', '*all beauty* is perishable', '*all man* (or mankind) is mortal' are formally analogous to '*all men* are mortal'. Such universal concepts of continua may also be expressed in still other analogous ways, e.g. '*cheese* is a food', '*all the cheese* that can be thought of is a food'. If *whole*, the true totalizer of such existents as 'cheese', cannot be used to universalize them, it follows that, by analogy, the universalizing *all* is not even linguistically, let alone logically, identical with the true totalizer *all*, but is merely a transferred use of the latter.

VII. EVALUATED TOTALIZERS

We have dealt only with those totalizers which are abstract and non-evaluated, that is, pure, denoting quantity and nothing else. But abstract totalizers, like other quantifiers, may also be evaluated, that is, they may include a reference to some notion of an evaluating category, as in *complete, full, enough.*

Such terms as *full* are used so frequently that they seem to have the value of pure totalizers, but actually they are totalized terms of quality. Thus, *full* is a capacity-totalized term of quality, applying, strictly speaking, only to volumes in space.

Some of the evaluated totalizers are:

full (totalizer applying primarily to space-bounded existents, with feeling-tone of satisfaction at cessation of operation of filling; frequently transferred to other types of existents).

enough, sufficient (totalizer of norm, with feeling-tone of satisfaction at fulfilment of given requirement).

complete (structuralized totalizer, with feeling-tone of satisfaction because of attainment of quantity aspect of structure).

entire (totalizer of negated absence, with feeling-tone of satisfaction because of inability to find any part missing).

intact (totalizer of negated interference).

perfect (totalizer of negated blemish, or of negated absence, where absence is felt as blemish; cf. value quantificates, pp. 25–7).

It is worth mentioning that such terms as *all* and *whole* are not infrequently used in a secondary, evaluated sense rather than in their primary, abstract sense. In such a sentence as 'It's *all of a* mile', '*all of a* mile' really means '*more than enough to be called a* mile'; if we rephrase the sentence as 'It's *a good* mile', we get a clearer linguistic expression of the evaluative feeling-tone of *all of a*. *All of a* and *a good* are, in effect, over-graded totalizers of norm of explicitly definite type (see section IV). In such sentences as '*Whole* lands were depopulated', '*Whole* cheeses were devoured', the *whole* is far from being a pure totalizer; it has the feeling of negated absence that belongs to *entire*. Even more complex in its logical analysis is such a term as *utter* in the sentence 'She is an *utter* failure', which is a totalizer of negated absence with strong negative affect (schematically: *deplorably entire*).

VIII. MODIFIED TOTALIZERS

Pure and evaluated totalizers, like other quantifiers, may be modified, but certain types of modified quantifiers are naturally absent from the full set of totalizers. Thus, there can hardly be a graded totalizer parallel to such terms as *few*, *many*, *more*, and *most*. If we say *fuller* or *the most complete*, it is not because we naturally grade concepts of totality but merely because such evaluated totalizers as *full* and *complete* may be taken in a derived or figurative sense which allows of grading. Thus, *fuller* implies a *full* which really means *abundant*, a concept that belongs to the sphere of *much* or *many*, not to that of *all*. Again, there can hardly be a selective totalizer parallel to such terms as *some* or *any* unless we consider *all of* in '*all of* the table' (type 2) and '*all of* the tables' (type 6) as such selectives, inasmuch as they are the totalizing limits of such series as '*half* the table', '*three fourths of* the table' and '*half of* the tables', '*three fourths of* the tables' respectively.

Among the more important of the modified totalizers are: the distributive totalizers, corresponding to such terms as *one by one, two each*, e.g. *distributively all*, which may be rephrased in such terms as *all of one (set) by all of another (set), by totals, in whole sets;* the selective distributive totalizers, e.g. *all of each;* the limitative totalizers, e.g. *quite all, absolutely all, 'just the whole of* it must be utilized, not merely a part'; and exclusives, e.g. 'you can buy *only the whole* set, not just one or two pieces'.

IX. NEGATED TOTALIZERS

Negated totalizers, as a rule, have the force of partials. In other words, the idea of totality is negatived or lifted, as it were, leaving the mind free to roam over the whole range of quantity lying on the minus side of totality. In English, however, these partials are not true affirmatives, but merely positives in the corresponding negative statement, i.e. '*Not everybody* came' does not mean '*Some* came', which is implied, but '*Some* did *not* come'. Logically, the negated totalizer should include the totalized negative, i.e. opposite or contrary, as a possibility, but ordinarily this interpretation is excluded and the totalized negative (contrary) is expressed by negating the corresponding unitizer or non-specifying selective. The table of examples on the next page will make this clear.

The negated totalized negative logically gives some type of partial, e.g. *not none* = *some*, 'it was*n't no*thing I got' = 'I got *some*thing', but such usages are not common in standard English. They are characteristic of Latin, however, e.g. *nonnulli* '*not none*', i.e. '*some, quite a few*'; *non nunquam* '*not never*', i.e. '*some*times'. On the other hand, when the negation is not of the totalized negative but of the statement as a whole, the net meaning is that of the contrary, i.e. a totalized affirmative; e.g. 'there was *none but* was present' = 'there was *none* who was *not* present' = '*every one* was present', '*all* were present'. Such totalizers of double negation may be called corrective totalizers, for they directly oppose a quantitative negation merely in order emphatically to affirm the notion of totality at the other extreme of the quantitative gamut. The corrective totalizer is sometimes directly expressed in English by *all*, as in 'it's *all* wheat', which has a doubly negative force, i.e. 'it's *nothing but* wheat', 'it consists of *nothing* which is *not* wheat'.

POSITIVE TOTALIZER	NEGATED TOTALIZER	= PARTIAL	NEGATED UNITIZER; NEGATED NON-SPECIFYING SELECTIVE	= TOTALIZED NEGATIVE (CONTRARY)
all the men	*not all* the men	*some of* the men	*not one* man, *not one of* the men; *not any* man, *not a* man, *not any of* the men	*no* man, *none of* the men, *no*body
all of it	*not all of* it	*some of* it	*not one bit of* it; *not any of* it	*none of* it
the whole table	*not the whole* table	*some of* the table, *a part of* the table	*not one part of* the table; *not any part of* the table	*no part of* the table, *none of* the table
*every*body, *every* one	*not every*body, *not every* one	*some*body, *some* one, *some, some* (people), *certain* ones	*not one, not a one; not any*body	*none, no*body
both of them	*not both of* them	*one of the two of* them	*not either* (*of the two of* them)	*neither of* them
*al*ways	*not al*ways	*some*times	*not ever; not* at *any* time	*never,* at *no* time
enough	*not enough*	*to some extent*	*not to any*[3] *extent, not any* (coll.)	*quite insufficiently*

[3] When *any* is accented. When *any* is not definitely stressed, 'not to any extent' means 'not to any considerable extent,' i.e. 'not enough to satisfy requirements.'

X. SPECIALIZED TOTALIZERS

Specialized totalizers are those in which the fundamental quantitative notion is so limited as to apply only to a particular class of existents. Thus, *the whole swarm of*, *the complete herd of*, *every one of the flock of* are specialized direct quanto-quantifiers of animal collectivities; *all three bushels of*, *a whole pint of* are specialized direct quanto-quantifiers of volume or capacity. As with general (abstract) totalizers, so with specialized ones—they may be direct or calculated, and each of these may be non-evaluated or evaluated, in turn simple or modified. Examples of such are: direct specialized totalizers, (a) non-evaluated simple: *all the acres of*; (b) non-evaluated modified: *only the total acreage of*; (c) evaluated simple: *the complete herd of*; (d) evaluated modified: *quite a full bushel of*, *an ample sufficiency of tonnage of* = *a more than sufficient weight of* (in terms of tons); calculated specialized totalizers, (a) non-evaluated simple: *the whole computed acreage of*; (b) non-evaluated modified: *absolutely all the remaining battalions of*; (c) evaluated simple: *the complete toll*[4] *of* (dead); (d) evaluated modified: *a merely sufficient quota*[5] *of* (immigrant laborers).

[4] *Toll* = counted (or computed) totality of (lost) human beings.

[5] *Quota* = allocated totality of human beings—totality of human beings assigned to some part of an implied whole.

XI. QUANTIFICATES INVOLVING TOTALIZATION

Specialized totalizers are a species of quantificates (quantified quantifiables). They consist of totalized quantificates (quantificates in which the quantifying element is the notion of totality) applied (or re-applied) for quantifying purposes. They may be called quantificate-totalizers. In them the notion of totality is used to quantify a quantitatively defined class of existents which is abstracted from the existents themselves (e.g. *flock*, *bushel*, *acre*), and the resultant term is used to quantify a member of the underlying class (e.g. *sheep*, *potatoes*, *land*). Like all other quantifiers, quantificate-totalizers answer the question 'How much (many)?' or 'To what degree?'.

We have now to take a glance at the different kinds of totalized quantificates in which the notion of totality determines a non-quantitative type of experience. The total number of possible terms of this sort is naturally immense and we need only list the types, with an example or two of each.

TOTALIZED QUANTIFICATES (not primarily totalizers)

A. Totalized quantificates which determine existents or occurrents
   1. Totalized selection quantificates (totalized selecters), e.g.: *all these*, *both of those*, *the whole of a certain*
   2. Totalized order quantificates (totalized orderers), e.g.: '*at every point* (in the system)', *throughout*, *the last* (= *the all-th*)
      2a. Totalized space quantificates (totalized spacers), e.g.: *everywhere* (corresponds to both *all* and *whole*), *at all places* (corresponds only to *all*), *throughout* (may be used of space-portions), *all over*
      2b. Totalized time quantificates (totalized timers), e.g.: *always* (corresponds to both *all* and *whole*), *at all times* (corresponds only to *all*), *throughout* (may be used of time-portions), *ever* (e.g. 'I am *ever* desirous of'; not to be confused with *ever* = *at any time*, e.g. 'if *ever* I am desirous of')
   3. Totalized condition quantificates (totalized conditioners), e.g.:

'*under all conditions*' (corresponds to *all*), '*whether* (he comes) *or not*' (corresponds to *both*)

4. Totalized purpose quantificates (totalized purposers), e.g.: *for all purposes, for the whole purpose, entirely in order to*
5. Totalized cause quantificates (totalized causers), e.g.: *for all reasons, each and every cause, the whole cause, completely determined* (as to cause)
6. *Totalized requirement (norm) quantificates* (totalized normers, e.g.: *corresponding to all requirements, complete* (in certain contexts, e.g. 'a *complete* solution of the difficulty')
7. Totalized manner (quality) quantificates (totalized qualifiers), e.g.: *in every way, of all kinds, 'the whole range (of types)', both sorts, entirely of a* (given) *kind, completely dark*
8. Totalized value quantificates (totalized valuers), e.g.: *perfect*

B. Totalized quantificates which are existents or occurrents

9. *Totalized existent quantificates* (totalized existentials), e.g.: *the whole world, the universe, all, everything, both hemispheres, 'every atom* (of his body)'
10. *Totalized occurrent quantificates* (totalized occurrents), e.g.: *to get completely dark, to finish* (related to both *all* and *whole*, e.g. '*to finish* the count' and '*to finish* the task'), *to pervade* (related to *whole* and *all of*, but not to *all* of discretes), *to consume, to annihilate, to reach up to, 'to embrace* (everything)' (related to cumulative totalizers like *each and every, one and all*)

It is difficult sometimes to classify actual terms involving quantity as a determinant, because there are many blended types. We have grouped manner and quality together, as it is only when specificity is actualized in an existent (e.g. 'a *wholly good* man') or in an event (e.g. 'to dance *wholly well*') that the difference between quality and manner arises. Our (*in*) *every way*, for instance, is superordinated to '*in every manner* (of happening)' and '(existent) *of every sort*', somewhat as order is superordinated to space and time. If desired, the group of totalized qualifiers may be subdivided into the two blend-groups of totalized existent-qualifiers and totalized occurrent-qualifiers. It is worth noting that what seem, from the linguistic viewpoint, to be quantifiers pure and simple are often really disguised quanto-qualifiers, e.g. 'I like *every*body', i.e. 'I like *every kind of* person', in answer to 'What sort of people do you like?'; '*all* land in this city is expensive', i.e. '*all the varieties of* land (even such as is of inferior grade)'. Observe that this

disguised totalized qualifier tends to take the form of the pseudo-totalizer of universal statements—naturally enough, when we consider the close relationship between the concepts of quality and class.

Totalized quantificates may be direct or calculated, and any of them may be modified. For the sake of schematic convenience we may list examples of totalized calculated quantificates:

TOTALIZED CALCULATED QUANTIFICATES

1. Selection: *the sum of these, 100% of a certain*
2. Order: *at every computed point* (in the system), *the last* (arrived at by successive subtraction)
   - 2a. Space: *the whole area, every accruing allotment* (of land)
   - 2b. Time: *a whole month, semester, cycle*
3. Condition: *all odds* (in its favor), *under enough conditions* (to secure his rights) (evaluated)
4. Purpose: *for all calculated purposes, every calculated goal*
5. Cause: *for all calculated reasons, altogether determinedly because*
6. Norm: *corresponding by calculation to all requirements, complete specifications*
7. Quality: *in every calculated way, entirely of a specified kind, quite black*
8. Value: *calculatedly perfect, perfect on every score* (count)
9. Existent: *all the (calculated) neurones* (calculated quanto-existents are generally reached through calculated quality)
10. Occurrent: *to finish according to schedule* (calculated quanto-occurrents are generally reached through calculated manner)

We need not go through the list of modified totalized quantificates, as they can be easily formed by determining our quantifiable categories by means of modified totalizers, e.g. *just perfect* (limit approximative-totalized value quantificate).

One may legitimately ask what difference of principle there is between certain evaluated quantifiers (e.g. *enough, complete, entire*) and certain classes of quantificates, say of norm or value, which may be used to quantify (e.g. *perfect, full, complete*). Obviously there is no hard and fast line between these classes of terms. Everything depends on whether we conceive of the emphasis as a quantitative one, the quantitative notion being somehow determined by non-quantitative determinants, or conceive of the emphasis as other than quantitative, the notion of quantity merely coming in as determinant. In *entire* we feel that the emphasis is essentially a totalizing one, with an overtone of

integration: '*nothing missing*'. In *perfect* the concept of totality is clearly subordinate to that of value, ideal. In other words, while *entire* and *perfect* are within hailing distance, *entire* faces such terms as *all, whole, total*, while *perfect* faces rather *supreme, excellent. Complete* seems to look both to *entire* and *perfect*, according to context. In such a sentence as 'This is a *complete* set of furniture' the emphasis is clearly on totality, with an overtone of either the normative or the integrative, hence it is a normative totalizer. But in 'the *complete* angler' the emphasis is not on the enumeration of qualities required for good fishing but rather on the successful pursuit of the sport by virtue of all and sundry qualities required, hence it is a totalized normer. To paraphrase, 'the set of furniture is *complete*', but 'the angler is a *finished* sportsman'. One possesses a normal totality, the other a total normality.

The touchstone to the classification of any such term in a given context is the question to which it can appropriately respond. If it responds to 'How much (many) (of) . . . . . ?' or 'To what degree . . . . . ?' it is a quantifier. If it does not, it is some other kind of determinant, which may, of course, include the notion of quantity.

Finally, we may point out that, properly speaking, such specialized totalizers as *a whole bushel of* go back to more or less hypothetical quantificates, of the class *a whole bushel* (as quantitatively determined portion of space, not yet as measure of capacity). Theoretically, every quantificate may become a specialized quantifier.

Thus, *everywhere*, a space quantificate, becomes a quantifier in such locutions as '*everywhere* in France one drinks wine', which is linguistically, rather than conceptually, distinct from 'in *the whole of* France one drinks wine'. Similarly, *the whole year* is clearly a time quantificate (specifically, a totalized timer), but in '*a whole year of* study' it is just as clearly a specialized totalizer, for it has become a measure of a time-measurable existent. '*Under enough conditions* (to secure his rights)', a norm-evaluated totalized conditioned quantificate, may be turned into '*a sufficiently conditioned number of* rights', a norm-evaluated totalized conditioned quantifier. The former term answers the question 'Under how many conditions?' or, better, 'Conditioned to what extent?' The latter answers the question 'How many rights?' Hence *a sufficiently conditioned number of*, though a very remarkable kind of quantifier, is just as truly one as *five* or *all*.

TABLE OF TOTALIZERS

(A. V. M.)

general (abstract)	direct	non-evaluated (pure)	simple	all, whole, each, every, both; none
			modified	absolutely the whole of, distributively all; none at all
		evaluated	simple	full, complete, enough (sufficient), entire, intact, perfect
			modified	quite enough, most complete
	calculated	non-evaluated	simple	the sum of, sum total of, net total of
			modified	just the sum of
		evaluated	simple	a calculatedly sufficient amount of, netting the entire
			modified	just a calculatedly sufficient amount of, netting just enough
specialized (concrete)	direct	non-evaluated	simple	swarm, the whole acreage of
			modified	only the total acreage of
		evaluated	simple	the complete herd of
			modified	an ample sufficiency of tonnage of
	calculated	non-evaluated	simple	the whole computed acreage of
			modified	absolutely all the remaining battalions of
		evaluated	simple	the complete toll of (dead)
			modified	a merely sufficient quota of

Note: Examples are merely illustrative.

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